

# Coziron Resources Limited

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Down-hole Assay Intercepts Summary from 2016 RC drilling on the Ashburton Magnetite Project, Yarraloola area, West Pilbara.

## **Highlights**

- RC programme completed in late 2016 consisted of 10 inclined (-60°) holes, each to a depth of 200m, for a total of 2000m at the Spinifex Hill, Rossi Hill and Walrus Ridge magnetite prospects.
- Prospects are located along 6km of the 12km long Ashburton magnetite project.
- Maximum downhole RC intercepts at Spinifex Ridge include YAR223 reporting 121 m @ 26.4% Fe from 64m and YAR227 with 137 m @ 28.3% Fe from 44m.
- Revised geological interpretation for Spinifex Ridge suggests a significant zone of magnetite mineralisation which has a minimum with of 300m.
- Intercepts at Rossi Hill indicate a minimum width of mineralisation of 150m, while reconnaissance-phase intercepts at Walrus Ridge indicate prospectivity across a zone of at least 500 m wide.
- All prospects remain open along strike.
- Follow-up Davis Tube recovery and XRF analysis will be used to establish mass-yield and quality of the magnetite concentrates as previous results have shown that samples can report a mass recovery to 42% with a magnetite concentrate of Fe greater than 67% and SiO<sub>2</sub> less than 5% at a measured P80 of 22 microns.

**ASX Code: CZR** 

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### **ASHBURTON DRILLING PROGRAM**

#### **Exploration Activities and Results**

The late 2016 drill programme on the Ashburton magnetite project completed 10 inclined (-60) RC holes to 200m deep to compliment previously reported results from the 2014 and 2015 drill programs. The 2016 holes were completed to better determine the distribution and grade of mineralisation at the Spinifex Hill, Rossi (previously Discovery North) and Walrus Ridge (previously Discovery South) prospects (Table 1; Fig 2). During drilling, samples were logged for geology and magnetic susceptibility and sampled for geochemistry on 1m intervals. Labelled samples were packed in bulka-bags and dispatched to Bureau Veritas laboratories for extended iron-ore-suite analysis by XRF on fused disks (Full details are presented in Appendix 1).

Drill-hole locations and a summary of the iron-suite assay down-hole intercepts through intervals with magnetic susceptibility greater than 10,000 SI units and sub-divided into the Spinifex Hill, Rossi and Walrus Ridge prospects are presented in Tables 1 and 2. Representative cross-sections are presented as Figs 3 to 5.

At Spinifex Hill, a cross-section with the interpreted geology and down-hole intercepts indicates that the zone of higher grade (Fe >25%) magnetite mineralisation is at least 300m wide (Fig 3) and intercepts are now reported along a strike length of about 500m (Fig 2).

At Rossi Hill, the two holes drilled on a new section of the prospect produced down-hole intercept across a zone of mineralisation that is at least 150m wide (Fig 4). While at Walrus Ridge, towards the southern portion of the Ashburton magnetite project, results from the 2014 to 2016 drilling programmes indicate an intercalation of magnetite-bearing intervals and volcaniclastic rocks that extend across a zone that is over 500m wide (Fig 5 and Fig 2).

### Further Work

Intervals from the RC drill samples will be sampled for magnetite mass-recovery and concentrate quality by Davis Tube and will be submitted to Bureau Veritas for analysis.

Results will be reported as they become available.

## **Ashburton Magnetite Project**

Background, Infrastructure and Exploration History

The Ashburton Magnetite Project covers a high-order, airborne, magnetic target some 12km long and 1km wide on Coziron tenements E08/1826 and E08/1686 in the West Pilbara (Fig 1). The project is located in the Ashburton Basin some 15km west of the contact with metasediments of the Hammersley Basin. The area is some 60km south of the Sino magnetite mine operated by Citic Pacific Mining and is immediately adjacent to bitumen road access from the Pannawonica road and Great Northern Highway. This transport infrastructure has the potential to provide access to port facilities at Cape Preston. The magnetite project is also only 1-2 kilometres east of two operating gas pipelines.

Coziron commenced exploration on the Ashburton magnetite project in late 2014 with three inclined (-60) RC holes for 600 m. Work continued in 2015 with 16 inclined 200m deep RC holes and three inclined diamond holes each of about 500 m. A further 10 inclined, 200 m deep RC holes were



completed in 2016. This early stage drilling is focussed onto prospects within the project where the geophysical interpretation indicates the near-surface expression of magnetite-bearing rocks.

Mapping, drilling and petrographic studies have established that the magnetite is hosted by chlorite, sericite and carbonate-bearing siliceous rocks (ASX: report 15<sup>th</sup> March 2017). The weathering interface is shallow and extends to only around 30 m below surface. The drill-intercepts to date are also characterised low sulphide content and an absence of asbestiform minerals.

Field measurements of down-hole magnetic susceptibility range from 10,000-60,000 SI units and produce assay intercepts with Fe greater than 20%. Grind-size and mass-recovery from RC and diamond-drill samples with the high magnetic susceptibility report a mass recovery up to 42% and the magnetite reporting Fe greater than 67% and  $SiO_2$  less than 5% at a measured P80 of 22 microns. The broadest intercepts, higher mass yields (greater than 25%) and better quality concentrates (Fe greater than 76% and  $SiO_2$  less than 5%) to date have been produced by drill-holes from the Spinifex Hill and Rossi Hill areas (ASX: report 28<sup>th</sup> April 2016, 3<sup>rd</sup> August 2016).

Mapping and drilling has also established that the magnetite mineralisation is hosted by a schistose suite of low-grade (greenschist facies) finely felsophyric metavolcanic, eta-volcaniclastic and intercalated metasediments that are cut by dolerites. The suite of rocks generally has a strike of about 330°, dips steeply to the south-west and shows evidence of at least three phases of folding. Down-hole logging and whole-rock assays show that the igneous rocks subdivide spatially into basalt to dolerite, high-K calc-alkaline series shoshonites and high-K andesites and calc-alkaline series dacites and rhyolites (Fig 6). These rock-types are indicative of a subduction-related setting which is a contrast to the proposed stable conditions for deposition in the Hamersley Basin.

Overall the early-stage exploration at the Ashburton magnetite project highlights its unique geological setting in the West Pilbara. The extent and grade of magnetite mineralisation that has been intersected during the initial drilling programmes suggest there is potential for a large tonnage of material. The mass-yield and concentrate quality also suggests there is strong potential for the recovery of a high-value iron-ore product. In addition, the geochemistry from the host-rocks to the magnetite mineralisation suggests an igneous origin associated with plate-margin tectonics that should be prospective for gold and base-metal mineralisation.

Further work is being planned to generate an ore-resource and establish additional parameters for a commercial mining and magnetite recovery operation along with the assessment of the host-rock sequence for base-metals and gold mineralisation.

For further information regarding this announcement please contact Adam Sierakowski on 08 6211 5099.

#### **Competent Persons Statement**

The information in this report that relates to exploration results is based on information compiled by Dr Rob Ramsay (BSc Hons, MSc, PhD) who is a Member of the Australian Institute of Geoscientists. Dr Ramsay is a full-time Consultant Geologist for Coziron. Dr Ramsay has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activities which they have undertaken to qualify as a Competent Persons as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Ramsay has given his consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.



Table 1. Summary of the 2016 RC drill-hole locations on the Ashburton Magnetite Project.

Drill-hole	Locality	Easting	Northing	Declination	Azimuth	Depth
YAR222	Spinifex Hill	398,543	7,613,189	-60	50	199
YAR223	Spinifex Hill	398,472	7,613,135	-60	50	199
YAR224	Spinifex Hill	398,425	7,613,100	-60	50	200
YAR225	Spinifex Hill	398,616	7,612,922	-60	230	198
YAR226	Spinifex Hill	398,416	7,613,345	-60	50	204
YAR227	Spinifex Hill	398,222	7,613,329	-60	50	198
YAR228	Rossi Hill	398,060	7,614,370	-60	50	198
YAR229	Rossi Hill	397,985	7,614,315	-60	50	198
YAR230	Walrus Ridge	400,700	7,609,650	-60	50	198
YAR231	Walrus Ridge	400,770	7,609,710	-60	50	197

Eastings and Northings in GDA, Zone 50.



Table 2. Summary of the geochemistry of the down-hole intercepts with magnetic susceptibility greater than 10,000 SI units.

# Spinifex Hill Prospect

HoleID	From	То	Interval		Fe	Fe-max	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO	MnO	Р	S	MgO	K <sub>2</sub> O	Na₂O	LOI
YAR222	3	33	30	Ox	29.29	35.09	48.95	4.17	0.41	0.23	0.14	0.102	0.003	0.58	0.32	0.07	2.91
YAR222	63	95	32	Ox	28.70	35.75	49.89	3.76	0.14	0.36	0.19	0.112	0.004	1.89	0.62	0.19	1.62
YAR223	0	20	20	Ox	26.33	33.04	48.10	4.51	0.19	2.62	0.09	0.049	0.012	0.81	0.47	0.06	5.09
YAR223	43	59	16	Ox/fr	27.65	34.19	50.52	2.40	0.18	1.22	0.10	0.143	0.024	2.35	0.49	0.13	2.49
YAR223	64	185	121		26.37	36.51	48.46	3.45	0.20	2.15	0.16	0.128	0.075	2.77	1.19	0.51	2.79
YAR224	0	18	18	Ox	25.37	34.09	49.74	7.68	0.44	0.59	0.08	0.025	0.009	0.44	0.22	0.07	4.12
YAR224	37	115	78	Ox/fr	28.89	34.40	47.43	2.28	0.15	1.92	0.20	0.128	0.037	2.58	0.82	0.40	2.37
YAR224	139	198	59		29.89	34.61	45.57	2.24	0.14	2.03	0.18	0.126	0.037	2.60	0.99	0.44	2.53
YAR225	122	134	12		23.44	29.21	50.19	4.17	0.24	3.26	0.27	0.092	0.129	2.32	1.34	0.41	3.58
YAR225	166	200*	34		28.83	34.49	47.56	1.89	0.08	2.28	0.17	0.125	0.045	2.32	0.76	0.38	2.80
YAR226	5	15	10	Ox	26.34	28.59	52.76	3.38	0.32	0.96	0.07	0.054	0.006	0.76	0.27	0.05	3.63
YAR226	43	51	8	Ox	26.24	29.69	50.90	4.94	0.19	0.37	0.09	0.118	0.002	1.98	0.82	0.03	2.86
YAR226	63	70	7	Ox	27.78	30.53	50.52	4.08	0.14	0.39	0.14	0.119	0.002	1.76	0.66	0.06	2.25
YAR226	85	141	56		29.22	31.32	47.51	1.91	0.07	2.52	0.14	0.121	0.042	2.55	0.89	0.31	2.00
YAR226	153	174	21		21.52	33.21	48.16	7.40	0.43	2.66	0.13	0.114	0.091	3.82	1.76	1.12	3.30
YAR226	186	200*	14		22.76	34.10	46.78	5.44	0.27	3.31	0.13	0.098	0.054	5.59	0.59	0.12	4.97
YAR227	44	181	137	Ox/Fr	28.32	36.01	46.93	2.55	0.14	2.22	0.17	0.124	0.029	2.65	0.77	0.37	3.29
YAR227	192	198	6		27.84	36.31	45.83	2.45	0.11	2.67	0.13	0.156	0.113	3.70	0.63	0.22	3.78

<sup>\*=</sup> hole terminated in mineralisation

Table 2 (cont). Summary of the geochemistry of the down-hole intercepts with magnetic susceptibility greater than 10,000 SI units.

# Rossi Hill Prospect

HoleID	From	To	Interval		Fe	Fe_max	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO	MnO	Р	S	MgO	K <sub>2</sub> O	Na₂O	LOI
YAR228	0	7	7	Ox	29.98	25.21	45.61	4.28	0.16	1.91	0.06	0.032	0.008	0.40	0.34	0.03	4.07
YAR228	15	97	82	Ox/fr	32.15	35.14	45.58	3.20	0.21	0.52	0.10	0.129	0.018	1.49	0.67	0.23	1.57
YAR228	122	135	13		20.26	39.88	51.10	7.22	0.24	1.79	0.16	0.094	0.066	2.73	2.20	0.71	4.28
YAR229	21	73	52	Ox/fr	29.91	23.09	45.30	3.61	0.38	1.38	0.11	0.115	0.025	2.36	1.01	0.34	2.28
YAR229	108	156	48		31.44	37.28	44.71	2.48	0.19	2.24	0.07	0.096	0.038	2.06	0.65	0.35	1.88
YAR229	190	198	8		20.00	37.44	50.22	7.41	0.33	2.09	0.15	0.099	0.081	3.32	2.15	0.82	4.32

<sup>\*=</sup> hole terminated in mineralisation

## Walrus Ridge Prospect

HoleID	From	To	Interval		Fe	Fe_max	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO	MnO	Р	S	MgO	K <sub>2</sub> O	Na₂O	LOI
YAR230	4	37	33	Ox	28.07	23.57	52.52	3.42	0.20	0.12	0.09	0.089	0.007	0.22	0.37	0.04	2.68
YAR230	45	76	31	Ox/fr	29.16	31.48	50.28	3.30	0.28	0.28	0.15	0.113	0.019	0.82	0.63	0.03	2.23
YAR230	100	104	4		20.48	32.25	53.71	4.69	0.14	1.92	0.14	0.080	0.131	2.34	1.22	0.39	5.64
YAR230	112	161	49		24.07	34.71	47.51	3.28	0.22	3.58	0.20	0.104	0.105	3.08	0.67	0.25	6.36
YAR230	186	190	4		25.99	37.22	45.35	3.56	0.29	2.94	0.16	0.082	0.078	3.63	0.62	0.16	5.78
YAR231	25	89	64	Ox/Fr	28.83	21.97	50.06	3.57	0.22	0.34	0.22	0.122	0.064	0.87	0.68	0.04	2.33
YAR231	115	128	13		31.20	32.05	43.52	2.46	0.15	2.10	0.11	0.106	0.041	2.47	0.56	0.30	3.38
YAR231	133	137	4		19.57	35.77	52.24	6.87	0.24	2.61	0.11	0.106	0.076	3.22	0.86	0.62	4.83
YAR231	145	151	6		28.40	36.12	45.98	3.67	0.13	2.40	0.14	0.132	0.199	2.43	0.81	0.62	2.58
YAR231	173	200*	27		31.98	38.49	44.31	2.40	0.19	1.73	0.09	0.102	0.032	2.22	0.68	0.33	2.02

<sup>\*=</sup> hole terminated in mineralisation



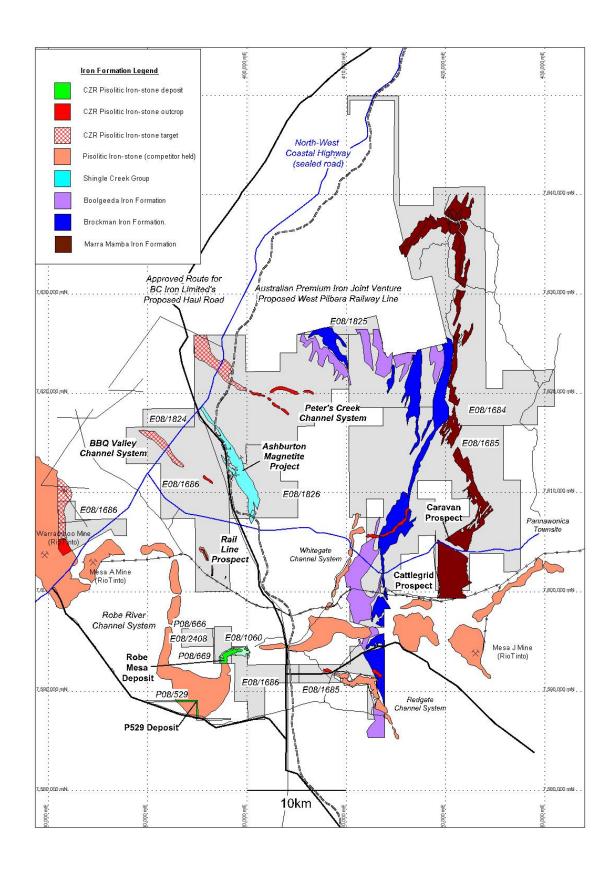


Fig 1. Location of Ashburton Magnetite Project and other significant deposits and prospective targets on the Yarraloola tenement holding, West Pilbara of Western Australia.

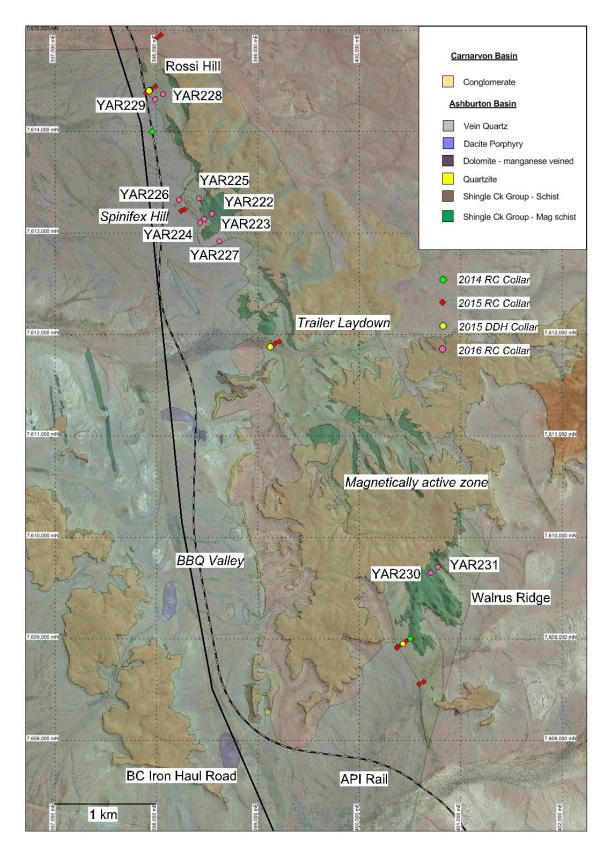


Fig 2. RC and diamond drill-collars for the magnetite-bearing sequence in the Ashburton Trough overlain on the 1VD magnetic imagery. (Green circles = 2014 RC, Yellow = 2015 diamond-hole, Red = 2015 RC and Purple = labelled 2016 RC).

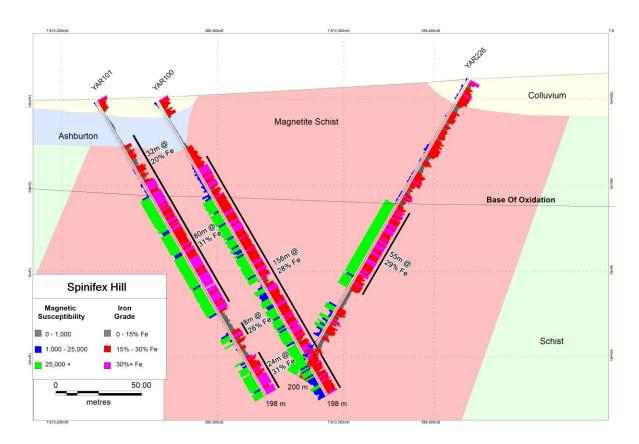


Fig 3 Spinifex Hill interpreted geological cross-section with YAR100 and YAR101 from 2015 RC programme and YAR226 from the 2016 programme showing the magnetic susceptibility and Fegrade as down-hole intercepts.

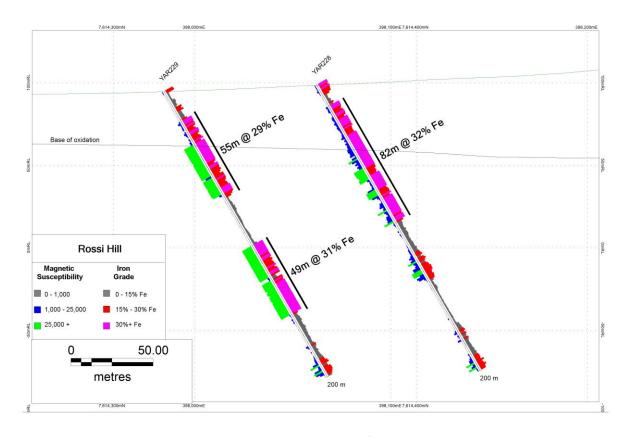


Fig 4 Rossi Hill cross-section with YAR228 and YAR229 from the 2016 programme showing the magnetic susceptibility and Fe-grade as down-hole intercepts.



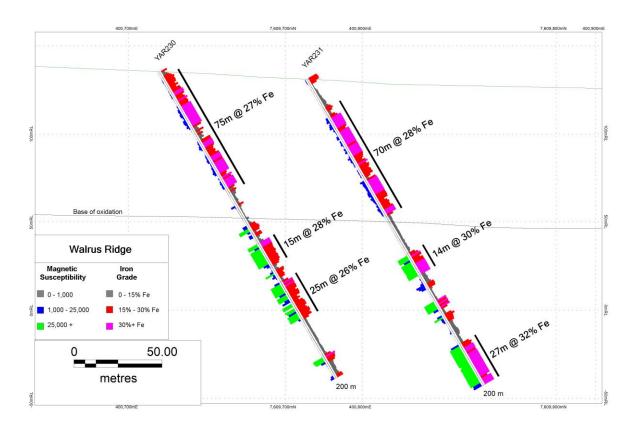


Fig 5 Walrus Ridge cross-section with YAR228 and YAR229 from the 2016 programme showing the magnetic susceptibility and Fe-grade as down-hole intercepts.

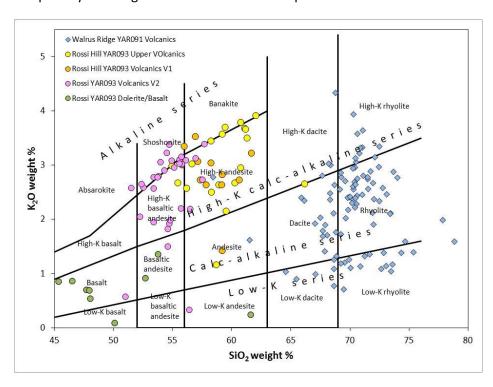


Fig 6 K<sub>2</sub>O verses SiO<sub>2</sub> discrimination plot for the felsic and chloritic rocks from YAR091 which intersects the western section of Walrus Ridge and YAR093 from Rossi Hill (fields from Ewart, 1982).

#### Reference

Ewart, A., 1982. The mineralogy and petrology of Tertiary-Recent orogenic volcanic rocks: with special reference to the andesitic-basaltic compositional range; p. 25-95 in, Thorp, R.S., ed., Andesites: Orogenic Andesites and Related Rocks, John Wiley and Sons, New York, 724 p.



Appendix 1 – Reporting of exploration results from the Ashburton Prospect in the Yarraloola Project - JORC 2012 requirements.

	Section 1 Sampling Techn	iques and Data				
Criteria	JORC Code explanation	Commentary				
	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	RC samples are derived from 5.5" (140mm) reverse circulation drilling holes with continuous down-hole sampling and HQ and NQ diamond drill-core is available for future work.				
Sampling techniques	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	All RC drill cuttings pass through a cone splitter and samples are collected on 1m intervals. During the drilling of each meter, 2-3kg of drill chips were split off and collected in a labelled calico sample bag. Diamond core is continuous and yet to be sampled				
	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	The entire 2-3kg RC drill-chip sample was dried and pulverized at Bureau Veritas Laboratories in Perth. Western Australia. A sub sample was fused with a lithium carbonate flux and the "extended iron-ore suite" of major oxide and selected trace-element analysis obtained by XRF Spectrometry on the disk. Au, Pt Pd has also been obtained by fire assay on a 50g sample charge.				
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Reverse circulation (RC) holes using a 5.5" (140mm) face-sampling percussion hammer. Diamond drilling uses HQ to approximately 200m and NQ recovery to the end of hole.				
	Method of recording and assessing core and chip sample recoveries and results assessed.	RC sample size was monitored by Geologists during the drilling programme. The volume of sample derived from each meter drilled was approximately equal.				
Drill sample recovery	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Standard RC sampling techniques were employed and deemed adequate for sample recovery. Some water was injected into the sample stream during drilling to minimise the loss of fine particles.				
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	The loss of fine material has been minimized during drilling. Sample recovery is regarded as being representative. Measurements indicate diamond core recovery beneath the uppermost interval of intense weathering is excellent.				
	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Each metre of reverse circulation chips is described geologically for mineralogy, colour and texture and magnetic susceptibility measured by hand held MagRock metre. No mineral resource estimates are included in this report.				
Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging is qualitative.				
	The total length and percentage of the relevant intersections logged.	All RC drill holes are logged at 1m intervals, for the entire length of each hole. All diamond core is measured to check the recovery and the entire hole is described for geology				



**N non-core, whether rifled, tube sampled and colory spit, etc. and whether is sampled well or dry.   **For all sample types, the nature, quality and appropriate personation of excellent personation of the control procedures adopted for all sub-sample preparation of excellent personation of the properties of the sample preparation of excellent personation of the properties of the sample preparation of excellent personation of the properties of the sample preparation of excellent personation of the properties of the sample preparation of the properties of the sample integrity.		If core, whether cut or sawn and whether quarter, half or all core taken.	Geochemical sampling of the core has not commenced only geological and physical properties of whole core are being reported at this stage.				
For all sample types, the nature, quality and appropriateness of the sample preparation technique.   Sub-sampling techniques and sample preparation technique.   Quality control procedures adopted for all sub-samples at the sample preparation of samples to maintain experience of the sample preparation of the sampling stages to maintain experience of the sampling is representative of the in situ material collected, including for instance results for field duplicated samples stages at the sampling is representative of the in situ material collected, including for instance results for field duplicated second-helf sampling.   Whether sample sizes are appropriate to the grain size of the material being sampled.			and split by a continuously operating rotary cone splitter				
Cuality control procedures adopted for all sub-samples were simultaneously collected in minoralized intervals, using the cone splitter attached to the drill rig. Approximately 1 in 20 duplicate samples were analysed to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate second half samples.    Makes were staken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate second half sample, providing an indication of composition of the sample, providing an indication of composition of the grain size of the material being sampled.    The review of the instance is substance is substance in the sample, providing an indication of composition of the material being sampled.    The providing an indication of composition of the material being sampled.		and appropriateness of the sample preparation	recovering representative samples though the interval of mineralization. The drilling contractor used suitable sample collection and handling procedures to maintain				
## Operation of the insturmation of the sampling of instance results for field duplicate/second-half sampling.  ## Whether sample sizes are appropriate to the grain size of the material being sampled.  ## The nature, quality and appropriateness of the assaying and laboratory procedures used and within the technique is considered partial or total.  ## For geophysical tools, spectrometers, thandheld KRF instruments, eith, the parameters used in determining the analysis including instrument make and model, reading times, and laboratory checks and laboratory checks and whether acceptable levels of accuracy (le ack of bias) and precision have been established.  ## The verification of significant intersections by either independent or alternative company personnel.  ## The use of twinned holes.  ## Documentation of primary data, data entry procedures, data verification, data stronge (physical and electronic) protocoles.  ## Discuss any adjustment to assay data.  ## Accuracy and quality of surveys used to correct fields.  ## Accuracy and quality of surveys used to correct fields.  ## Accuracy and quality of surveys used to correct fields.  ## Accuracy and quality of surveys used to correct fields.  ## Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Microsof Accuracy of surveys used to correct fields.  ## Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Microsof and locations were derived from a hand held Garmin 7th grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates.	techniques and sample	sub-sampling stages to maximise representivity	mineralized intervals, using the cone splitter attached to the drill rig. Approximately 1 in 20 duplicate samples were				
The nature, quality and appropriate to the grain size of the material being sampled.  * The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  * For geophysical tools, spectrometers, handheld XRF instruments, etc. the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.  * Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of a curracy (le lack of bias) and precision have been established.  * The use of twinned holes.  * The use of twinned holes.  * The use of twinned holes.  * Documentation of primary data, data entry procedures, data and electronic) protocols.  * Documentation of primary data, data entry procedures, and electronic) protocols.  * Discuss any adjustment to assay data.  * Accuracy and quality of surveys used to locate drift holes collated in holes (or the parameters used in Mineral Resource estimation.  * Specification of the grid system used.  * The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates.		sampling is representative of the in situ material collected, including for instance results for field	the cone-splitter selects a representative proportion of the sample, providing an indication of compositional variations associated with each lithology or mineralized				
## the assaying and laboratory procedures used and whether the technique is considered partial or total.  ## For geophysical tools, spectrometers, handheld XFR instruments, etc. the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.  ## Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and precision have been established.  ## Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (et lack to bias) and precision have been established.  ## No independent of alternative company personnel.  ## The use of twinned holes.  ## Documentation of significant intersections by either independent or alternative company personnel.  ## Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  ## Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  ## Discuss any adjustment to assay data.  ## A Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  ## Open Intercepts the protocol of the grid system used.  ## The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates.			for each sample is sufficient to provide a representative				
A hand-held XRF instruments, etc, the parameters used to record the response from the drill-chips and the response highlights the highly magnetic intercepts of magnetite schist in drill-holes.		the assaying and laboratory procedures used and whether the technique is considered partial	on fused disk and is a total assay method for major				
adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.  • The verification of significant intersections by either independent or alternative company personnel.  • The use of twinned holes.  • The use of twinned holes.    Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  • Discuss any adjustment to assay data.    Location of data points	data and	handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation,	record the response from the drill-chips and the response highlights the highly magnetic intercepts of magnetite				
by either independent or alternative company personnel.  • The use of twinned holes.  The drill intercepts reported are from an early stage exploratory drill programme.  • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  • Discuss any adjustment to assay data.  Location of data points  by either independent or alternative company used to verify the intersections.  The drill intercepts reported are from an early stage exploratory drill programme.  Data is delivered as both an electronic file and in pdf format by Bureau Veritas and the data is loaded into a Microsoft access database. The loaded data is regularly checked by a competent person against the pdf file to ensure all the oxides and elements are loaded into the correct fields.  • Discuss any adjustment to assay data.  Assay data is not adjusted.  Drill hole locations were derived from a hand held Garmin 72h GPS units, with an average accuracy of ±3m.  The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates		adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias)					
Verification of sampling and assaying  Data is delivered as both an electronic file and in pdf format by Bureau Veritas and the data is loaded into a Microsoft access database. The loaded data is regularly checked by a competent person against the pdf file to ensure all the oxides and elements are loaded into the correct fields.  Discuss any adjustment to assay data.  Assay data is not adjusted.  Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  Specification of the grid system used.  The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates		by either independent or alternative company					
Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.      Discuss any adjustment to assay data.      Specification of the grid system used.      The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates		The use of twinned holes.					
Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.      Specification of the grid system used.      The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates	sampling and	procedures, data verification, data storage	format by Bureau Veritas and the data is loaded into a Microsoft access database. The loaded data is regularly checked by a competent person against the pdf file to ensure all the oxides and elements are loaded into the				
Location of data points  Iocate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  • Specification of the grid system used.  Drill hole locations were derived from a hand held Garmin 72h GPS units, with an average accuracy of ±3m.  The grid system is MGA GDA94, zone 50, all easting's and northing's are reported in MGA co-ordinates		Discuss any adjustment to assay data.	Assay data is not adjusted.				
and northing's are reported in MGA co-ordinates		locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations					
		Specification of the grid system used.					



	Quality and adequacy of topographic control.	SRTM90 data is used to provide topographic control and is regarded as being adequate for early stage exploration.				
	Data spacing for reporting of Exploration Results.	The drill holes are located to examine the sub-surface geology associated with a series of different magnetic targets within the Ashburton Trough sequence.				
Data spacing and distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	No Mineral Resources or Ore Reserve estimations are being presented in this report.				
	Whether sample compositing has been applied.	All geochemical data reported is derived from the 1m interval samples.				
Orientation of	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Mineralization is contained within a sequence that dips at about 70 to the south-west				
data in relation to geological structure	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The drill orientation was selected to minimise any sampling bias.				
Sample security	The measures taken to ensure sample security.	Samples are collected, labelled, packed in bulka bags and transported by RGR Transport from site directly to Bureau Veritas laboratories in Perth.				
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of the sampling techniques and data have been obtained.				
	Section 2 Reporting of Exp	loration Results				
Criteria	JORC Code explanation	Commentary				
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	All exploration licenses and prospecting licenses owned 85% by Zanthus Resources Ltd and 15% by ZanF Pty Ltd. The tenements are covered by the Kuruma Marthudunera Native Title Claim and relevant heritage agreements are in place.				
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and no known impediments exist.				
		In 1990-1991, Aberfoyle Resources held tenements covering the Ashburton Trough which partially overlapped Yarraloola. They collected 26 rock-chip and 73 stream sediment samples for gold and base-metal exploration but encountered no significant results and surrendered the ground.				
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	In 1991-1992, Poseidon Exploration Ltd held exploration tenements covering the Ashburton Trough which partially overlapped Yarraloola for base-metals, gold and iron-ore. They collected 54 rock-chips, 236 soil samples, 492 stream sediment samples and completed 159 RAB holes for 2410m but encountered no significant mineralisation and surrendered the tenements.				
		In 1997-1998, Sipa Resources NL held tenements over the Ashburton Trough that partially covered Yarraloola for gold and base-metals. A field trip after the interpretation of LANDSAT and air-photos collected six rock-chip samples which failed to detect mineralisation and the tenements were surrendered.				



		In 2005-2009, Red Hill Iron Ltd held a tenement 15km northwest of Pannawonica which partially overlapped Yarraloola for gold and base-metal prospectivity. Following and aeromagnetic survey and air-photo interpretation, 16 rock-chips and 207 soil samples were collected but no targets were generated and the ground was surrendered.			
Geology	Deposit type, geological setting and style of mineralisation.	The eastern section of the Yarraloola tenements covers Archaean-age chemical and clastic sediments overlying basalts in the Hamersley Basin. The western part of the tenements covers deformed Palaeoproterozoic mostly clastic sediments of the Ashburton Trough which are overlain by more recent undeformed detritus associated with the Carnarvon Basin. Sediments of the Hamersley and Carnarvon Basins are known to host economic deposits of iron-ore.			
		The magnetite mineralization described in this report is hosted within graphitic and chloritized volcanic schists of the Ashburton Trough.			
	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:				
	o easting and northing of the drill hole collar	Drill hole collar Eastings and Northings are reported using map projection GDA Zone50, entered into an Access database and the map locations have been checked by the competent person.			
Drill hole Information	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	The area has only minor relief and a nominal RL of 140m above sea level from the SRTM90 is used for results in this report. A differential GPS survey will provide future surface control.			
	o dip and azimuth of the hole	All holes in the Ashburton are -60 to 050.			
	o down hole length and interception depth	Down hole lengths and intercept depths are calculated from 1m interval samples that are progressively collected as the holes are drilled.			
	o hole length.	Hole lengths are reported both on the geological and driller logs, entered into the access database and have been checked by a competent person.			
	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	Reported down-hole intercepts have magnetic susceptibility greater than 5000 times the host-rock sequence. The reported intervals provide guidance for future drilling to determine true thickness. No upper cut has been applied.			
Data aggregation methods	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	The aggregate intercepts reported are calculated averages of 1m interval samples.			
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are presented			
Relationship between mineralisation	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The -60 inclined drill-holes are designed to intercept the moderately to steeply dipping geology and obtain sections across the geological units.			
widths and intercept lengths	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	The relationship of the down-hole widths and the true thickness is yet to be determined.			



	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	A map of drill-hole locations is shown in Figure 2. Three representative sections are reported showing down-hole magnetic susceptibility and iron-content.
Diagrams	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The intervals reported represent the down-hole intercepts of magnetite rich rocks which are the focus zones for future work
Balanced reporting	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Intervals of samples with elevated magnetic susceptibility.
Other substantive exploration data	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	DGPS surveying over the mineralized area, geochemical analysis, quantitative mineralogical studies, along with infill and extensional drilling are being planned.
Further work	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Areas with high magnetic responses have been identified in Fig 2.

